(FILE 'USPAT' ENTERED AT 10:45:47 ON 19 AUG 94) SET PAGELENGTH SCROLL L10 S ORGANOPHOSPH? (10A) ACID? (10A) ANHYDRAS? L2 0 S ORGANOPHOS? AND ACID? AND NAHYDRASE? L3 3869 S ORGANOPHOS? L4354115 S ACID? L5711 S ANHYDRAS? 1.6 1 S L3 AND L4 AND L5 L7 59 S ACID? (20A) ANHYDRASE? 0 S L7 AND L3 r_8 31 S L7 AND PHOSPHOR? 1.9

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- 1. 5,316,911, May 31, 1994, Method of determining the presence of endotoxin in a sample; Leif Baek, et al., 435/7.9, 7.1, 7.2, 7.21, 7.93, 7.94 [IMAGE AVAILABLE]
- 2. 5,312,816, May 17, 1994, Method of combatting osteoporosis in mammalian subjects, utilizing organic boron compounds; Bernard F. Spielvogel, et al., 514/64; 568/1, 2 [IMAGE AVAILABLE]
- 3. 5,283,188, Feb. 1, 1994, Isolation, purification, characterization, cloning and sequencing of N.sup..alpha. -acetyltransferase; John A. Smith, et al., 435/193, 69.1, 252.3, 252.31, 320.1; 536/23.2; 935/14, 28, 29, 34, 39, 68, 74 [IMAGE AVAILABLE]
- 4. 5,278,270, Jan. 11, 1994, Hydrophilic and amphiphatic monomers, their polymers and gels and hydrophobic electrophoresis; Branko Kozulic, et al., 526/304; 564/208 [IMAGE AVAILABLE]
- 5. 5,273,885, Dec. 28, 1993, Conjugates of monophenyl thyroid analogs useful in assays; Jill M. Visor, et al., 435/7.93, 7.9, 975 [IMAGE AVAILABLE]
- 6. 5,242,937, Sep. 7, 1993, Topically active ocular thiadiazole sulfonamide carbonic anhydrase inhibitors; William M. Pierce, Jr., 514/363; 544/284; 546/113; 548/139, 141 [IMAGE AVAILABLE]
- 7. 5,240,923, Aug. 31, 1993, Sulfonamides useful as carbonic anhydrase inhibitors; Thomas R. Dean, et al., 514/226.5, 211, 373; 540/552; 544/48; 548/207, 209, 212 [IMAGE AVAILABLE]
- 8. 5,231,168, Jul. 27, 1993, Malaria antigen; Morten Dziegiel, et al., 530/350, 300 [IMAGE AVAILABLE]
- 9. 5,221,736, Jun. 22, 1993, Sequential peptide and oligonucleotide syntheses using immunoaffinity techniques; Thomas R. Coolidge, et al., 536/25.31; 435/4, 5, 6, 7.5, 7.8, 91.5, 803, 810; 436/518, 531, 824; 530/387.1; 536/26.71; 935/17, 19, 88 [IMAGE AVAILABLE]
- 10. 5,202,007, Apr. 13, 1993, Hydrophilic synthetic gels and their use in electrophoresis; Branko Kozulic, 204/182.8, 180.1, 299R [IMAGE AVAILABLE]
- 11. 5,185,466, Feb. 9, 1993, Hydrophilic and amphiphatic monomers, their

polymers and gels and hydrophobic electrophoresis; Branko Kozulic, et al., 564/208 [IMAGE AVAILABLE]

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- 12. 5,183,752, Feb. 2, 1993, Heat-labile phosphatase; John P. Markwell, et al., 435/196, 91.53, 917 [IMAGE AVAILABLE]
- 13. 5,175,113, Dec. 29, 1992, Modified .beta..sub.2 -microglobulin; Mogens H. Nissen, et al., 436/548; 424/85.8; 435/7.1, 7.5, 7.92, 7.93; 436/518, 804; 530/387.9, 388.85, 391.1, 391.3, 403 [IMAGE AVAILABLE]
- 14. 5,153,192, Oct. 6, 1992, Thiophene sulfonamides useful as carbonic anhydrase inhibitors; Thomas R. Dean, et al., 514/226.5; 544/48 [IMAGE AVAILABLE]
- 15. 5,128,459, Jul. 7, 1992, Isolation, purification, characterization, cloning and sequencing of N alpha-acetyltransferase; John A. Smith, et al., 435/252.3, 320.1; 536/23.2; 935/11, 22, 66 [IMAGE AVAILABLE]
- 16. 5,059,613, Oct. 22, 1991, Topically active ocular benzothiazole sulfonamide carbonic anhydrase inhibitors; William M. Pierce, Jr., 514/367; 548/166 [IMAGE AVAILABLE]
- 17. 5,055,480, Oct. 8, 1991, Topically active ocular gem-diacylthiadiazole sulfonamide carbonic anhydrase inhibitors; William M. Pierce, Jr., 514/363; 548/141 [IMAGE AVAILABLE]
- 18. 5,051,371, Sep. 24, 1991, Modified .beta..sub.2 -microglobulin; Mogens H. Nissen, et al., 436/545, 518, 543, 544, 547; 530/324, 380, 386, 387.9, 388.25, 389.3, 392, 394, 403, 811, 812, 864 [IMAGE AVAILABLE]
- 19. 5,047,257, Sep. 10, 1991, Sprout-damaged wheat flour containing barley alpha-amylase inhibitor; Urszula Zawistowska, 426/622, 27, 549; 530/375 [IMAGE AVAILABLE]
- 20. 5,045,448, Sep. 3, 1991, Method and products for detection of human T cell leukemia virus; Myron E. Essex, et al., 435/5, 7.92, 235.1, 975; 530/350, 395 [IMAGE AVAILABLE]
- 21. 4,966,848, Oct. 30, 1990, Isolation, purification, characterization, cloning and sequencing of N .alpha.-acetyltransferase; John A. Smith, et al., 435/193, 942 [IMAGE AVAILABLE]
- 22. 4,910,297, Mar. 20, 1990, Alpha-amylase inhibitor; Urszula Zawistowska, 530/375; 426/27, 549, 622; 530/372, 374 [IMAGE AVAILABLE]
- 23. 4,780,405, Oct. 25, 1988, Carbonic inhibitor-tagged nucleic probes; Emil T. Kaiser, et al., 435/6, 7.33, 7.92; 436/501; 536/23.2, 24.3, 24.31, 25.32; 548/136; 549/223; 935/77, 78 [IMAGE AVAILABLE]
- 24. 4,767,714, Aug. 30, 1988, Method for the preparation of yeast chromatin for isolation of p20 polypeptide; Channa Shalitin, 435/272, 68.1, 71.1; 530/358, 824 [IMAGE AVAILABLE]
- 25. 4,761,209, Aug. 2, 1988, System for the extraction and utilization of oxygen from fluids; Joseph Bonaventura, et al., 204/129; 95/54; 96/8; 123/2, 22, DIG.13; 204/265, 266, DIG.4; 429/12, 122 [IMAGE AVAILABLE]

- 26. 4,743,678, May 10, 1988, Method and products for detection of human T cell leukemia virus; Myron E. Essex, et al., 530/350; 424/89; 435/5, 188; 436/518, 531, 533, 542, 543, 544, 545, 546, 813, 823; 530/395 [IMAGE AVAILABLE]
- 27. 4,602,987, Jul. 29, 1986, System for the extraction and utilization of oxygen from fluids; Joseph Bonaventura, et al., 204/129, 130; 261/DIG.28; 422/48; 423/129, 579 [IMAGE AVAILABLE]
- 28. 4,472,498, Sep. 18, 1984, Analysis film and a method of analysis using the same; Nobuhito Masuda, et al., 435/7.7; 422/56, 57; 435/7.71, 7.72, 7.9, 805, 970; 436/500, 527, 537, 810, 815 [IMAGE AVAILABLE]
- 29. 4,463,090, Jul. 31, 1984, Cascade amplification enzyme immunoassay; Curtis C. Harris, 435/7.7, 7.71, 7.9, 7.91, 13, 23, 24, 188, 810, 966, 975; 436/829 [IMAGE AVAILABLE]
- 30. 3,974,037, Aug. 10, 1976, Process for measuring carbon dioxide content of the body fluid; Thomas H. Adams, 435/26, 4, 15, 183, 188, 194, 232, 808 [IMAGE AVAILABLE]
- 31. 3,963,578, Jun. 15, 1976, Stabilization of phosphoenol pyruvate carboxylase; Walter Brent Aitken, et al., 435/4; 424/2; 435/188, 232, 823, 830, 832, 840, 849, 879 [IMAGE AVAILABLE]

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04-16192

Jan. 21, 1992

L16: 1 of 2

CHLAMYDOMONAS CARBONIC ANHYDRASE GENE

INVENTOR: SHIGETO MIYAJI, et al. (2)
ASSIGNEE: NIPPON STEEL CORP, et al. (80)

APPL NO: 02-117636 DATE FILED: May 9, 1990 PATENT ABSTRACTS OF JAPAN

ABS GRP NO: C0932

ABS VOL NO: Vol. 16, No. 168 ABS PUB DATE: Apr. 22, 1992

INT-CL: C12N 15*60; //(C12 N15*60; C12R 1*01)

ABSTRACT:

PURPOSE: To enable use as a CO.sub.2 concentration-sensitive vector by fragmenting a DNA capable of coding a specific amino acid sequence with an intron.

CONSTITUTION:A Chlamydomonas strain is cultured under conditions of ventilation at a high CO.sub.2 concentration, and then cultured under ventilation at a low CO.sub.2 concentration ventilation, while being continuously irradiated with light to provide cells (A), which are then subjected to crushing, precipitating and fractionating treatment with ammonium sulfate to afford a CA protein (B) having carbonic (CA) activity. The resultant ingredient (B) is then enzymically hydrolyzed to afford amino sequences (C) expressed by formulas I and II. On the other hand, the ingredient (A) is extracted to provide the whole Chlamydomonas DNA ingredients, which are subsequently treated with restriction enzymes, etc., to afford a genomic DNA library (D). The obtained ingredient (D) is then screened with a DNA probe (E) synthesized by containing the ingredient (C) to produce the Chlamydomonas carbonic gene having the DNA capable of coding an amino sequence,

expressed by formula III fragmented with an intron, and further, a DNA expressed by formula IV, etc.

04-16191 Jan. 21, 1992 L16: 2 of 2 CHLAMYDOMONAS CARBONIC ANHYDRASE cDNA

INVENTOR: SHIGETO MIYAJI, et al. (2)
ASSIGNEE: NIPPON STEEL CORP, et al. (80)

APPL NO: 02-117635

DATE FILED: May 9, 1990 PATENT ABSTRACTS OF JAPAN

ABS GRP NO: C0932

ABS VOL NO: Vol. 16, No. 168 ABS PUB DATE: Apr. 22, 1992

INT-CL: C12N 15*60; //(C12 N15*60; C12R 1*01)

ABSTRACT:

PURPOSE: To enable transduction of a recombinant DNA into plants, etc., by containing a DNA capable of coding a specific amino sequence in a Chlamydomonas carbonic cDNA.

CONSTITUTION:A Chlamydomonas strain is cultured under conditions of ventilation at a high CO.sub.2 concentration, and then cultured under conditions of ventilation at a low CO.sub.2 concentration to provide cells (A), which are subsequently crushed, precipitated and fractionated with ammonium sulfate to afford a protein (B) having carbonic anhydrase (CA) activity. On the other hand, the ingredient (A) is subjected to treatment such as decomposition, linking and transduction to provide a CACDNA library (D). A DNA containing the ingredient (C) is then synthesized to prepare a probe (E), which is used to screen the ingredient (D) and produce a Chlamydomonas carbonic cDNA composed of the DNA capable of coding an amino sequence, expressed by formula III, etc., and containing a DNA expressed by formula IV, etc.